

SEQUENCE LISTING

<110> Birkett, Ashley J.

<120> IMMUNOGENIC HBc CHIMER PARTICLES HAVING ENHANCED STABILITY

<130> 4564/81175 ICC-102.2

<140> NOT YET ASSIGNED

<141> 2001-08-15

<150> 60/226,867

<151> 2000-08-22

<150> 60/225,843

<151> 2000-08-16

<160> 313

<170> PatentIn Ver. 2.1

<210> 1

<211> 16

<212> PRT

<213> Plasmodium falciparum

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<213> Streptococcus pneumoniae

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Lys Leu Glu Glu Leu Ser Asp Lys Ile Asp Glu Leu Asp Ala Glu
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<211> 35

<212> PRT

<213> Streptococcus pneumoniae

USPTO Patent Application Sequence Listing

<400> 4
Gln Lys Lys Tyr Asp Glu Asp Gln Lys Lys Thr Glu Glu Lys Ala Ala
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Leu Glu Lys Ala Ala Ser Glu Glu Met Asp Lys Ala Val Ala Ala Val
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Gln Gln Ala
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Pro Ala Ala Gln Gln Asp Lys Pro Ala Asp Ala
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<213> Human immunodeficiency virus type 1

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Asn

<210> 7
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 <212> PRT
 <213> Yersinia pestis

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 20 25 30

Ile Tyr Ser Val Ile Gln Ala Glu Ile Asn Lys His Leu Ser Ser Ser
 35 40 45

Gly Thr Ile Asn Ile His Asp Lys Ser Ile Asn Leu Met Asp Lys Asn
 50 55 60

Leu Tyr Gly Tyr Thr Asp Glu Glu Ile Phe Lys Ala Ser Ala Glu Tyr
 65 70 75 80

Lys Ile Leu Glu Lys Met Pro Gln Thr Thr Ile Gln Val Asp Gly Ser
 85 90 95

Glu Lys Lys Ile Val Ser Ile Lys Asp Phe Leu Gly Ser Glu Asn Lys
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<213> Haemophilus influenzae

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<210> 14
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<212> PRT
<213> Moraxella catarrhalis

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<213> Moraxella catarrhalis

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<213> Porphyromonas gingivalis

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<212> PRT

<213> Porphyromonas gingivalis

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<211> 21

<212> PRT

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<212> PRT
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Asn Pro Asn Val
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DRAFT - FOR REVIEW ONLY

<210> 26
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Asn Val

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Asn Val Asp Pro
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<210> 32
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Asp Pro

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<213> Plasmodium falciparum

<400> 33
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Asp Pro Asn Ala
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<210> 34
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Pro Ala Gly

<210> 35
<211> 18
<212> PRT
<213> Plasmodium vivax

<400> 35

Arg Ala Asp Asp Arg Ala Ala Gly Gln Pro Ala Gly Asp Gly Gln Pro
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Ala Gly

<210> 36

<211> 18

<212> PRT

<213> Plasmodium vivax

<400> 36

Ala Asn Gly Ala Gly Asn Gln Pro Gly Ala Asn Gly Ala Gly Asp Gln
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Pro Gly

<210> 37

<211> 18

<212> PRT

<213> Plasmodium vivax

<400> 37

Ala Asn Gly Ala Asp Asn Gln Pro Gly Ala Asn Gly Ala Asp Asp Gln
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Pro Gly

<210> 38

<211> 18

<212> PRT

<213> Plasmodium vivax

<400> 38

Ala Asn Gly Ala Gly Asn Gln Pro Gly Ala Asn Gly Ala Asp Asn Gln
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Pro Gly

<210> 39

<211> 18

<212> PRT

<213> Plasmodium vivax

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Ala Asn Gly Ala Asp Asn Gln Pro Gly Ala Asn Gly Ala Asp Asp Gln
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Pro Gly

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<211> 22

<212> PRT

<213> Plasmodium vivax

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Gln Glu Gly Gly Ala Ala
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<210> 41

<211> 16

<212> PRT

<213> Plasmodium berghei

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Asp Pro Pro Pro Pro Asn Pro Asn Asp Pro Pro Pro Pro Asn Pro Asn
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<210> 42

<211> 24

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<213> Plasmodium yoelii

<400> 42

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Ala Pro Gln Gly Pro Gly Ala Pro
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<210> 43

<211> 15

<212> PRT

<213> Streptococcus sobrinus

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Lys Pro Arg Pro Ile Tyr Glu Ala Lys Leu Ala Gln Asn Gln Lys
1 5 10 15

<210> 44

<211> 16

<212> PRT

<213> Streptococcus sobrinus

<400> 44

Ala Lys Ala Asp Tyr Glu Ala Lys Leu Ala Gln Tyr Glu Lys Asp Leu
1 5 10 15

<210> 45

<211> 9

<212> PRT

<213> Shigella flexneri

<400> 45
Lys Asp Arg Thr Leu Ile Glu Gln Lys
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<210> 46
<211> 15
<212> PRT
<213> respiratory syncytial virus

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Cys Ser Ile Cys Ser Asn Asn Pro Thr Cys Trp Ala Ile Cys Lys
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<210> 47
<211> 25
<212> PRT
<213> Entamoeba histolytica

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1 5 10 15

Ile Ala Asp Val Glu Lys Cys Asn Gln
20 25

<210> 48
<211> 34
<212> PRT
<213> Schistosoma japonicum

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Arg Arg Ala Lys Ser Ala Glu Ser Leu Ala Ser Glu Leu Gln Arg Arg
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Val Asp

<210> 49
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<212> PRT
<213> Schistosoma mansoni

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20 25 30

Val Asp

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<211> 17

<212> PRT

<213> Corynebacterium diphtheriae

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Cys

<210> 52

<211> 25

<212> PRT

<213> Borrelia burgdorferi

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<210> 53

<211> 19

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<213> Borrelia burgdorferi

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<210> 54

<211> 11

<212> PRT

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<210> 55

<211> 21

<212> PRT

<213> Trypanosoma cruzi

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<210> 57

<211> 16

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<211> 18

<212> PRT

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Ser Cys

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<211> 20

<212> PRT

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<211> 16

<212> PRT

<213> Streptococcus sobrinus

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<210> 62

<211> 17

<212> PRT

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Cys

<210> 63

<211> 16

<212> PRT

<213> Lymphocytic choriomeningitis virus

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<210> 64

<211> 16

<212> PRT

<213> Clostridium tetani

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Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu Leu Cys
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<211> 18

<212> DNA

<213> plasmid pKK223

HEPATITIS B VIRUS

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<400> 68	gcggaattcc ttccaaattha acacccacc	29
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<212> DNA		
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<210> 70		
<211> 31		
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<212> DNA		
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Pro Glu Leu

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<211> 49
<212> DNA
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<211> 31
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Pro Asn Ala Asn Pro Asn Val Asp Pro Asn Ala Asn Pro Glu Leu
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tccgaacgtt gacccgaacg ctaatccgga gct 93

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<211> 91
<212> DNA
<213> Plasmodium falciparum

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<210> 89
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ttggatccac gttcggattc gcgtt 85

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<210> 94
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tggtagct 69

<210> 95
<211> 61
<212> DNA
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<210> 96
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<212> PRT
<213> Plasmodium falciparum

<400> 96
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Ala Asn Pro Asn Val Asp Pro Glu Leu
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<212> DNA
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Pro Asn Val Glu Leu
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<210> 104
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Pro Asn Val Asp Pro Glu Leu
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<210> 107
<211> 61
<212> DNA
<213> Plasmodium falciparum

<400> 107
cagggtaaac attcgggttg gcgtttggat tagcgtagg gttggcattt ggatccacgt 60
t 61

<210> 108
<211> 25
<212> PRT
<213> Plasmodium falciparum

<400> 108
Ile Asn Val Asp Pro Asn Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn
1 5 10 15

Pro Asn Val Asp Pro Asn Ala Glu Leu
20 25

<210> 109
<211> 75
<212> DNA
<213> Plasmodium falciparum

<400> 109
aattaacgtg gatccaaatg ccaaccctaa cgctaattca aacgccaacc cgaatgttga 60
ccctaattgt gagct 75

<210> 110
<211> 67
<212> DNA
<213> Plasmodium falciparum

<400> 110
cagcattagg gtcaacattc gggttggcgt ttggattagc gttagggttg gcatttggat 60
ccacgtt 67

<210> 111
<211> 19
<212> PRT
<213> Plasmodium falciparum

<400> 111
Ile Asp Pro Asn Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn Pro Asn
1 5 10 15

Val Glu Leu

<210> 112
<211> 57
<212> DNA
<213> Plasmodium falciparum

<400> 112
aattgatcca aatgccaacc ctaacgctaa tccaaacgcc aacccgaatg ttgagct 57

<210> 113
<211> 49
<212> DNA
<213> Plasmodium falciparum

<400> 113
caacattcgg gttggcggtt ggatttagcgt tagggttggc atttggatc 49

<210> 114
<211> 21
<212> PRT
<213> Plasmodium falciparum

<400> 114
Ile Asp Pro Asn Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn Pro Asn
1 5 10 15

Val Asp Pro Glu Leu
20

<210> 115
<211> 63
<212> DNA
<213> Plasmodium falciparum

<400> 115
aattgatcca aatgccaacc ctaacgctaa tccaaacgcc aacccgaatg ttgaccctga 60
gct 63

<210> 116
<211> 55
<212> DNA
<213> Plasmodium falciparum

<400> 116
cagggtcaac attcgggttg gcgtttggat tagcgttagg gttggcattt ggatc 55

<210> 117
<211> 23
<212> PRT
<213> Plasmodium falciparum

<400> 117
Ile Asp Pro Asn Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn Pro Asn
1 5 10 15

Val Asp Pro Asn Ala Glu Leu
20

<210> 118
<211> 69
<212> DNA
<213> Plasmodium falciparum

<400> 118
aattgatcca aatgc当地 acc ctaacgctaa tccaaacgccc aacccgaatg ttgaccctaa 60
tgccgagct 69

<210> 119
<211> 61
<212> DNA
<213> Plasmodium falciparum

<400> 119
cggcattagg gtcaacattc gggttggcgt ttggattagc gttagggttg gcatttggat 60
C 61

<210> 120
<211> 21
<212> PRT
<213> Plasmodium falciparum

<400> 120
Ile Glu Tyr Leu Asn Lys Ile Gln Asn Ser Leu Ser Thr Glu Trp Ser
1 5 10 15

Pro Cys Ser Val Thr
20

<210> 121
<211> 69
<212> DNA
<213> Plasmodium falciparum

<400> 121
aattgaatat ctgaacaaaa tccagaactc tctgtccacc gaatggtctc cgtgctccgt 60
tacctagta 69

<210> 122
<211> 69
<212> DNA
<213> Plasmodium falciparum

<400> 122
agcttaactag gtaacggagc acggagacca ttccgtggac agagagttct ggattttgtt 60
cagatattc 69

<210> 123
<211> 24
<212> PRT
<213> Plasmodium vivax

<400> 123
Ile Pro Ala Gly Asp Arg Ala Asp Gly Gln Pro Ala Gly Asp Arg Ala
1 5 10 15
Ala Gly Gln Pro Ala Gly Glu Leu
20

<210> 124
<211> 72
<212> DNA
<213> Plasmodium vivax

<400> 124
aattccggct ggtgaccgtg cagatggcca gccagcggtt gaccgcgtg caggccagcc 60
ggctggcgag ct 72

<210> 125
<211> 64
<212> DNA
<213> Plasmodium vivax

<400> 125
cgccagccgg ctggcctgca gcgcggcac ccgctggctg gccatctgca cggtcaccag 60
ccgg 64

<210> 126
<211> 21
<212> PRT
<213> Plasmodium vivax

<400> 126
Ile Asp Arg Ala Ala Gly Gln Pro Ala Gly Asp Arg Ala Asp Gly Gln
1 5 10 15
Pro Ala Gly Glu Leu
20

<210> 127
<211> 63
<212> DNA
<213> Plasmodium vivax

<400> 127
aattgacaga gcagccggac aaccaggcagg cgatcgagca gacggacagc ccgcaggggga 60
gct 63

<210> 128
<211> 55
<212> DNA
<213> Plasmodium vivax

<400> 128
cccctgcggg ctgtccgtct gctcgatcgc ctgctggttg tccggctgct ctgtc 55

<210> 129
<211> 21
<212> PRT
<213> Plasmodium vivax

<400> 129
Ile Ala Asn Gly Ala Gly Asn Gln Pro Gly Ala Asn Gly Ala Gly Asp
1 5 10 15

Gln Pro Gly Glu Leu
20

<210> 130
<211> 63
<212> DNA
<213> Plasmodium vivax

<400> 130
aattgcgaac ggccgcggta atcagccggg ggcaaacggc gccccgtgatc aaccaggggga 60
gct 63

<210> 131
<211> 55
<212> DNA
<213> Plasmodium vivax

<400> 131
cccctggttg atcacccgcg ccgttgcgc ccggctgatt accggcgccg ttgc 55

<210> 132
<211> 21
<212> PRT
<213> Plasmodium vivax

<400> 132
Ile Ala Asn Gly Ala Asp Asn Gln Pro Gly Ala Asn Gly Ala Asp Asp
1 5 10 15

Gln Pro Gly Glu Leu
20

DRAFT

<210> 133
<211> 63
<212> DNA
<213> Plasmodium vivax

<400> 133
aattgcgaac ggccggata atcagccggg tgcaaacggg gcggatgacc aaccaggcga 60
gct 63

<210> 134
<211> 55
<212> DNA
<213> Plasmodium vivax

<400> 134
cgccctggttg gtcatccgcc ccgttgac ccggctgatt atcggcgccg ttcgc 55

<210> 135
<211> 39
<212> PRT
<213> Plasmodium vivax

<400> 135
Ile Ala Asn Gly Ala Gly Asn Gln Pro Gly Ala Asn Gly Ala Gly Asp
1 5 10 15

Gln Pro Gly Ala Asn Gly Ala Asp Asn Gln Pro Gly Ala Asn Gly Ala
20 25 30

Asp Asp Gln Pro Gly Glu Leu
35

<210> 136
<211> 117
<212> DNA
<213> Plasmodium vivax

<400> 136
aattgcgaac ggccggata atcagccggg agcaaacggc gcgggggatc aaccaggcgc 60
caatggtca gacaaccagc ctggggcgaa tggagccat gaccaaccccg gcgagct 117

<210> 137
<211> 109
<212> DNA
<213> Plasmodium vivax

<400> 137
cgccgggttg gtcatcggtt ccattcgccc caggctggtt gtctgcacca ttggcgctg 60
gttgatcccc cgccgggtt gctcccggtt gattaccggc gccgttcgc 109

<210> 138
<211> 25
<212> PRT
<213> Plasmodium vivax

<400> 138
Ile Ala Pro Gly Ala Asn Gln Glu Gly Gly Ala Ala Ala Pro Gly Ala
1 5 10 15

Asn Gln Glu Gly Gly Ala Ala Glu Leu
20 25

<210> 139
<211> 75
<212> DNA
<213> Plasmodium vivax

<400> 139
aattgcgccc ggcgccaacc aggaagggtgg ggctgcagcg ccaggagcca atcaagaagg 60
cggtgacgc gagct 75

<210> 140
<211> 67
<212> DNA
<213> Plasmodium vivax

<400> 140
ccgctgcacc gccttcttga ttggctcctg ggcgtgcagc cccaccttcc tggttggcgc 60
ccggcgc 67

<210> 141
<211> 21
<212> PRT
<213> Plasmodium vivax

<400> 141
Ile Glu Tyr Leu Asp Lys Val Arg Ala Thr Val Gly Thr Glu Trp Thr
1 5 10 15

Pro Cys Ser Val Thr
20

<210> 142
<211> 69
<212> DNA
<213> Plasmodium vivax

<400> 142
aattgaatat ctggataaaag tgcgtgcgac cggtggcacg gaatggactc cgtgcagcgt 60
gacctaata 69

<210> 143
<211> 69
<212> DNA
<213> Plasmodium vivax

<400> 143
agcttattag gtcacgctgc acggagtcca ttccgtgcc aacggtcgcac gcactttatc 60
cagatattc 69

<210> 144
 <211> 10
 <212> PRT
 <213> Plasmodium falciparum

<400> 144
 Thr Val Ser Ala Pro Ser Trp Glu Thr Ser
 1 5 10

<210> 145
 <211> 42
 <212> DNA
 <213> Plasmodium falciparum

<400> 145
 gccaaagctta ctaggtaacg gaggccggag accattcggt gg 42

<210> 146
 <211> 44
 <212> DNA
 <213> Plasmodium vivax

<400> 146
 cgcgaaattca agcgaacggc gccgataatc agccgggggg tgca 44

<210> 147
 <211> 8
 <212> PRT
 <213> Hepatitis B virus

<400> 147
 Cys Val Val Thr Thr Glu Pro Leu
 1 5

<210> 148
 <211> 37
 <212> DNA
 <213> Hepatitis B virus

<400> 148
 cgcaagctta ctagcaaaca acagtagtct ccggaag 37

<210> 149
 <211> 7
 <212> PRT
 <213> Hepatitis B virus

<400> 149
 Pro Leu Thr Ser Leu Ile Pro
 1 5

<210> 150
 <211> 32
 <212> DNA
 <213> Hepatitis B virus

G G

<400> 150
cgcaagctta cggaagtgtt gataggatag gg 32

<210> 151
<211> 8
<212> PRT
<213> Hepatitis B virus

<400> 151
Thr Ser Leu Ile Pro Ala Asn Pro
1 5

<210> 152
<211> 34
<212> DNA
<213> Hepatitis B virus

<400> 152
cgcaagctta tggtgatagg ataggggcat ttgg 34

<210> 153
<211> 7
<212> PRT
<213> Hepatitis B virus

<400> 153
Leu Ile Pro Ala Asn Pro Pro
1 5

<210> 154
<211> 31
<212> DNA
<213> Hepatitis B virus

<400> 154
cgcaagctta taggataggg gcatttggtg g 31

<210> 155
<211> 6
<212> PRT
<213> Hepatitis B virus

<400> 155
Ile Pro Ala Asn Pro Pro
1 5

<210> 156
<211> 28
<212> DNA
<213> Hepatitis B virus

<400> 156
gcgaagctta gataggggca tttgggtgg 28

<210> 157
<211> 6
<212> PRT
<213> Hepatitis B virus

<400> 157
Pro Ala Asn Pro Pro Arg
1 5

<210> 158
<211> 28
<212> DNA
<213> Hepatitis B virus

<400> 158
cgcaagctta aggggcattt ggtggtct 28

<210> 159
<211> 7
<212> PRT
<213> Hepatitis B virus

<400> 159
Cys Pro Ala Asn Pro Pro Arg
1 5

<210> 160
<211> 7
<212> PRT
<213> Hepatitis B virus

<400> 160
Ala Asn Pro Pro Arg Tyr Ala
1 5

<210> 161
<211> 31
<212> DNA
<213> Hepatitis B virus

<400> 161
gcgaagctta gcaaggggca tttgggtggtc t 31

<210> 162
<211> 30
<212> DNA
<213> Hepatitis B virus

<400> 162
gcgaagctta ggcatttggc ggtctatagc 30

<210> 163
<211> 8
<212> PRT
<213> Hepatitis B virus

<400> 163
Cys Ala Asn Pro Pro Arg Tyr Ala
1 5

<210> 164
<211> 32
<212> DNA
<213> Hepatitis B virus

<400> 164
gcgaaggctta gcaggcattt ggtggtctat aa 32

<210> 165
<211> 7
<212> PRT
<213> Hepatitis B virus

<400> 165
Asn Pro Pro Arg Tyr Ala Pro
1 5

<210> 166
<211> 31
<212> DNA
<213> Hepatitis B virus

<400> 166
cgcaaggctta atttgtggc ctataagctg g 31

<210> 167
<211> 8
<212> PRT
<213> Plasmodium falciparum

<400> 167
Asn Ala Asn Pro Asn Val Asp Pro
1 5

<210> 168
<211> 6
<212> PRT
<213> Homo sapiens

<400> 168
Asn Tyr Lys Lys Pro Lys
1 5

<210> 169

<211> 7

<212> PRT

<213> Hepatitis B virus

<400> 169

Lys Arg Gly Pro Arg Thr His

1

5

<210> 170

<211> 21

<212> PRT

<213> Homo sapiens

<400> 170

Leu His Pro Asp Glu Thr Lys Asn Met Leu Glu Met Ile Phe Thr Pro

1

5

10

15

Arg Asn Ser Asp Arg

20

<210> 171

<211> 5

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 171

Arg Ile Lys Gln Ile

1

5

<210> 172

<211> 11

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 172

Arg Ile Lys Gln Ile Gly Met Pro Gly Gly Lys

1

5

10

<210> 173

<211> 10

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 173

Leu Leu Glu Leu Asp Lys Trp Ala Ser Leu

1

5

10

<210> 174

<211> 14

<212> PRT

<213> Human immunodeficiency virus type 1

<400> 174

Glu Gln Glu Leu Leu Glu Leu Asp Lys Trp Ala Ser Leu Trp

1

5

10

<210> 175
<211> 33
<212> PRT
<213> Human immunodeficiency virus type 1

<400> 175
Val Gln Gln Gln Asn Asn Leu Leu Arg Ala Ile Glu Ala Gln Gln His
1 5 10 15

Leu Leu Gln Leu Thr Val Trp Gly Ile Lys Gln Leu Gln Ala Arg Ile
20 25 30

Leu

<210> 176
<211> 16
<212> PRT
<213> Human immunodeficiency virus type 1

<400> 176
His Leu Leu Gln Leu Thr Val Trp Gly Ile Lys Gln Leu Gln Ala Arg
1 5 10 15

<210> 177
<211> 36
<212> PRT
<213> Human immunodeficiency virus type 1

<400> 177
Tyr Thr His Ile Ile Tyr Ser Leu Ile Glu Gln Ser Gln Asn Gln Gln
1 5 10 15

Glu Lys Asn Glu Gln Glu Leu Leu Ala Leu Asp Lys Trp Ala Ser Leu
20 25 30

Trp Asn Trp Phe
35

<210> 178
<211> 26
<212> PRT
<213> Human immunodeficiency virus type 1

<400> 178
Tyr Thr His Ile Ile Tyr Ser Leu Ile Glu Gln Ser Gln Asn Gln Gln
1 5 10 15

Glu Lys Asn Glu Gln Glu Leu Leu Glu Leu
20 25

<210> 179
<211> 19
<212> PRT
<213> Homo sapiens

<400> 179

Gly Arg Glu Arg Arg Pro Arg Leu Ser Asp Arg Pro Gln Leu Pro Tyr
1 5 10 15

Leu Glu Ala

<210> 180

<211> 20

<212> PRT

<213> Homo sapiens

<400> 180

Arg Glu Gln Arg Arg Phe Ser Val Ser Thr Leu Arg Asn Leu Gly Leu
1 5 10 15

Gly Lys Lys Ser

20

<210> 181

<211> 18

<212> PRT

<213> Plasmodium yoelii

<400> 181

Pro Asn Lys Leu Pro Arg Ser Thr Ala Val Val His Gln Leu Lys Arg
1 5 10 15

Lys His

<210> 182

<211> 11

<212> PRT

<213> Plasmodium yoelii

<400> 182

Thr Ala Val Val His Gln Leu Lys Arg Lys His
1 5 10

<210> 183

<211> 22

<212> PRT

<213> Plasmodium vivax

<400> 183

Pro Ala Gly Asp Arg Ala Asp Gly Gln Pro Ala Gly Asp Arg Ala Ala
1 5 10 15

Ala Gly Gln Pro Ala Gly

20

<210> 184
<211> 12
<212> PRT
<213> Avian leukosis virus

<400> 184
Asn Gln Ser Trp Thr Met Val Ser Pro Ile Asn Val
1 5 10

<210> 185
<211> 16
<212> PRT
<213> Avian leukosis virus

<400> 185
Met Ile Lys Asn Gly Thr Lys Arg Thr Ala Val Thr Phe Gly Ser Val
1 5 10 15

<210> 186
<211> 19
<212> PRT
<213> Foot-and-mouth disease virus

<400> 186
Pro Asn Leu Arg Gly Asp Leu Gln Val Leu Ala Gln Lys Val Ala Arg
1 5 10 15

Thr Leu Pro

<210> 187
<211> 26
<212> PRT
<213> Foot-and-mouth disease virus

<400> 187
Arg Tyr Asn Arg Asn Ala Val Pro Asn Leu Arg Gly Asp Leu Gln Val
1 5 10 15

Leu Ala Gln Lys Val Ala Arg Thr Leu Pro
20 25

<210> 188
<211> 16
<212> PRT
<213> Hepatitis C virus

<400> 188
Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
1 5 10 15

Leu

<210> 189
<211> 34
<212> PRT
<213> Hepatitis B virus

<400> 189
Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro Arg Arg
1 5 10 15

Arg Arg Ser Gln Ser Pro Arg Arg Arg Ser Gln Ser Arg Glu Ser
20 25 30

Gln Cys

<210> 190
<211> 16
<212> PRT
<213> Hepatitis B virus

<400> 190
Gly Ile Val Asn Leu Glu Asp Pro Ala Ser Arg Asp Leu Val Val Ser
1 5 10 15

<210> 191
<211> 17
<212> PRT
<213> Hepatitis B virus

<400> 191
Gly Ile Val Asn Leu Glu Asp Pro Ala Ser Arg Asp Leu Val Val Ser
1 5 10 15

Cys

<210> 192
<211> 20
<212> PRT
<213> Plasmodium falciparum

<400> 192
Glu Tyr Leu Asn Lys Ile Gln Asn Ser Leu Ser Thr Glu Trp Ser Pro
1 5 10 15

Cys Ser Val Thr
20

<210> 193
<211> 9
<212> PRT
<213> Plasmodium vivax

<400> 193
Asp Arg Ala Xaa Gly Gln Pro Ala Gly
1 5

<210> 194
<211> 9
<212> PRT
<213> Plasmodium vivax

<400> 194
Ala Asn Gly Ala Xaa Asx Gln Pro Gly
1 5

<210> 195
<211> 11
<212> PRT
<213> Plasmodium vivax

<400> 195
Ala Pro Gly Ala Asn Gln Glu Gly Gly Ala Ala
1 5 10

<210> 196
<211> 19
<212> PRT
<213> Plasmodium vivax

<400> 196
Tyr Leu Asp Lys Val Arg Ala Thr Val Gly Thr Glu Trp Thr Pro Cys
1 5 10 15

Ser Val Thr

<210> 197
<211> 21
<212> PRT
<213> Plasmodium vivax

<400> 197
Pro Ala Gly Asp Arg Ala Asp Gly Gln Pro Ala Gly Asp Arg Ala Ala
1 5 10 15

Gly Gln Pro Ala Gly
20

<210> 198
<211> 18
<212> PRT
<213> Plasmodium vivax

<400> 198
Asp Arg Ala Ala Gly Gln Pro Ala Gly Asp Arg Ala Asp Gly Gln Pro
1 5 10 15

Ala Gly

<210> 199
<211> 36
<212> PRT
<213> Plasmodium vivax

<400> 199
Ala Asn Gly Ala Gly Asn Gln Pro Gly Ala Asn Gly Ala Gly Asp Gln
1 5 10 15

Pro Gly Ala Asn Gly Ala Asp Asn Gln Pro Gly Ala Asn Gly Ala Asp
20 25 30

Asp Gln Pro Gly
35

<210> 200
<211> 18
<212> PRT
<213> Plasmodium vivax

<400> 200
Ala Asn Gly Ala Gly Asn Gln Pro Gly Ala Asn Gly Ala Gly Asp Gln
1 5 10 15

Pro Gly

<210> 201
<211> 19
<212> PRT
<213> Plasmodium vivax

<400> 201
Gln Ala Asn Gly Ala Asp Asn Gln Pro Gly Ala Asn Gly Ala Asp Asp
1 5 10 15

Gln Pro Gly

<210> 202
<211> 22
<212> PRT
<213> Plasmodium vivax

<400> 202
Ala Pro Gly Ala Asn Gln Glu Gly Gly Ala Ala Ala Pro Gly Ala Asn
1 5 10 15

Gln Glu Gly Gly Ala Ala
20

<210> 203
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Hepatitis B
virus PCR primer with an NcoI restriction site

<400> 203
ttggccatg gacatcgacc ctta

24

<210> 204
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Hepatitis B
virus PCR primer with an EcoRI restriction site.

<400> 204
gcggagctct ttttccaaat taattaacac ccac

34

<210> 205
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Hepatitis B
virus PCR primer with EcoRI and SacI restriction
sites and an inserted lysine codon

<400> 205
cgcgagctcg atccagcgtc tagagagacc

30

<210> 206
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Hepatitis B
virus PCR primer with HindIII restriction site

<400> 206
cgcaagctta aacaacagta gtctccggaa g

31

<210> 207
<211> 14
<212> PRT
<213> Hepatitis B virus

<400> 207
Cys Gln Glu Lys Gln Leu Asp Glu Asn Ala Asn Val Gln Leu
1 5 10

<210> 208
<211> 13
<212> PRT
<213> Hepatitis B virus

<400> 208
Cys Ser Lys Lys Gly Pro Arg Ala Ser Gly Asn Leu Ile
1 5 10

<210> 209
<211> 21
<212> PRT
<213> Hepatitis B virus

<400> 209
Cys Leu Leu Thr Glu His Arg Met Thr Trp Asp Pro Ala Gln Pro Pro
1 5 10 15

Arg Asp Leu Thr Glu
20

<210> 210
<211> 22
<212> PRT
<213> Hepatitis B virus

<400> 210
Cys Val Lys Arg Met Lys Glu Ser Arg Leu Glu Asp Thr Gln Lys His
1 5 10 15

Arg Val Asp Phe Leu Gln
20

<210> 211
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cytochrome
P-450 fragment

<400> 211
Cys Met Gln Leu Arg Ser
1 5

<210> 212
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cytochrome
P-450 fragment

<400> 212
Cys Arg Phe Ser Ile Asn
1 5

<210> 213
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cytochrome
P-450 fragment

<400> 213
Cys Ala Val Pro Arg
1 5

<210> 214
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cytochrome
P-450 fragment

<400> 214
Cys Val Ile Pro Arg Ser
1 5

<210> 215
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cytochrome
P-450 fragment

<400> 215
Cys Phe Ile Pro Val
1 5

<210> 216
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cytochrome
P-450 fragment

<400> 216
Cys Thr Val Ser Gly Ala
1 5

<210> 217
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Cytochrome
P-450 fragment

<400> 217
Cys Thr Leu Ser Gly Glu
1 5

<210> 218
<211> 20
<212> PRT
<213> Hepatitis B virus

<400> 218
Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Ser Arg Asp Leu Val
1 5 10 15

Val Ser Tyr Val
20

<210> 219
<211> 63
<212> DNA
<213> Hepatitis B virus

<400> 219
gctacacctggg tgggtgttaa tttggaagat ccagcgtcta gagacctagt agtcagttat 60
gtc 63

<210> 220
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: K inserted at
amino acid position 75 of Hepatitis B core

<400> 220
Thr Trp Val Gly Val Lys Asn Leu Glu Asp Pro Ala Ser Arg Asp Leu
1 5 10 15

Val Val Ser Tyr Val
20

<210> 221
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Lysine codon
aaa inserted to make HBc- K75 mutant

<400> 221
gctacacctggg tgggtgttaa aaatttggaa gatccagcgt c 41

<210> 222
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: K inserted at
amino acid position 76 of Hepatitis B core

<400> 222
Thr Trp Val Gly Val Asn Lys Leu Glu Asp Pro Ala Ser Arg Asp Leu
1 5 10 15

Val Val Ser Tyr Val
20

<210> 223
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Lysine codon
aaa inserted to make HBc-K76 mutant

<400> 223
ttaataaaatt ggaagatcca gcgtcta 27

<210> 224
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: K inserted at
position 77 of Hepatitis B virus core

<400> 224
Thr Trp Val Gly Val Asn Leu Lys Glu Asp Pro Ala Ser Arg Asp Leu
1 5 10 15

Val Val Ser Tyr Val
20

<210> 225
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Lysine codon
aaa inserted to make HBC-K77 mutant

<400> 225
ttaatttcaa agaagatcca gcgtctaa

<210> 226
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: K inserted at
amino acid position 78 of Hepatitis B core

<400> 226
Thr Trp Val Gly Val Asn Leu Glu Lys Asp Pro Ala Ser Arg Asp Leu
1 5 10 15

Val Val Ser Tyr Val
20

<210> 227
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Lysine codon
aaa inserted to make HBC-K78 mutant

<400> 227
ttaatttcaa aaaagatcca gcgtctagag ac

<210> 228
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: K inserted at
amino acid position 79 fo Hepatitis B core.

<400> 228
Thr Trp Val Gly Val Asn Leu Glu Asp Lys Pro Ala Ser Arg Asp Leu
1 5 10 15

Val Val Ser Tyr Val
20

<210> 229
<211> 36
<212> DNA
<213> Artificial Sequence

27

32

<220>
<223> Description of Artificial Sequence: Lysine codon
aaa inserted to make HBC-K79 mutant

<400> 229
ttaatttgg a agataaacca gcgtctagag acctag

<210> 230
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: K inserted at
amino acid position 79 of Hepatitis B core

<400> 230
Thr Trp Val Gly Val Asn Leu Glu Asp Pro Lys Ala Ser Arg Asp Leu
1 5 10 15

Val Val Ser Tyr Val
20

<210> 231
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Lysine codon
aaa inserted to make HBC-K80 mutant

<400> 231
ttaatttgg a agatccaaaa gcgtctagag acctagtag

<210> 232
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: K inserted at
amino acid position 81 of Hepatitis B core

<400> 232
Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Lys Ser Arg Asp Leu
1 5 10 15

Val Val Ser Tyr Val
20

<210> 233
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Lysine codon
aaa inserted to make HBc-K81 mutant

<400> 233
ttaatttgga agatccagcg aaatcttagag accttagtagt cag

43

<210> 234
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: K inserted at
amino acid position 82 of Hepatitis B core

<400> 234
Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Ser Lys Arg Asp Leu
1 5 10 15

Val Val Ser Tyr Val
20

<210> 235
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Lysine codon
aaa inserted to make HBc-K82 mutant

<400> 235
ttaatttgga agatccagcg tctaaaagag accttagtagt cagtt

45

<210> 236
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: K inserted at
amino acid position 83 to Hepatitis B core

<400> 236
Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Ser Arg Lys Asp Leu
1 5 10 15

Val Val Ser Tyr Val
20

<210> 237
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Lysine codon
aaa inserted to make HBC-K83 mutant

<400> 237
ttaatttgga agatccagcg tctagaaaaag acctagtagt cagttatgtc 50

<210> 238
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: K inserted at
amino acid position 83 of Hepatitis B core

<400> 238
Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Ser Arg Asp Lys Leu
1 5 10 15

Val Val Ser Tyr Val
20

<210> 239
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Lysine codon
aaa inserted to make HBC-K84 mutant

<400> 239
ttaatttgga agatccagcg tctagagaca aactagtagt cagttatgtc 50

<210> 240
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: K inserted at
amino acid position 85 of Hepatitis B core

<400> 240
Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Ser Arg Asp Leu Lys
1 5 10 15

Val Val Ser Tyr Val
20

<210> 241
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Lysine codon
aaa inserted to make HBc-K85 mutant

<400> 241
ctcgagagac ctaaaagttag tcagttatgt c 31

<210> 242
<211> 36
<212> PRT
<213> Hepatitis B virus

<400> 242
Gly Ile Gln Trp Met Glu Trp Asp Arg Glu Ile Asn Asn Tyr Thr Ser
1 5 10 15

Leu Ile His Ser Leu Ile Glu Glu Ser Gln Asn Gln Gln Glu Lys Asn
20 25 30

Glu Gln Glu Leu
35

<210> 243
<211> 102
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: human
cytochrome P450

<400> 243
aatttggatg tgggaagatc gtgagatcaa caattatacc agcctgatac attcttaat 60
tgaagagtcc cagaaccaac aggagaaaaa tgaacaagag ct 102

<210> 244
<211> 94
<212> DNA
<213> Hepatitis B virus

<400> 244
cttgttcatt tttctcctgt tggttctggg actcttcaat taaagaatgt atcaggctgg 60
tataattgtt gatctcacga tcttcccaca tcca 94

<210> 245
<211> 6
<212> PRT
<213> Hepatitis B virus

<400> 245
Met Asp Ile Asp Pro Tyr
1 5

<210> 246
 <211> 217
 <212> PRT
 <213> Spermophilus variegatus

<400> 246
 Met Tyr Leu Phe His Leu Cys Leu Val Phe Ala Cys Val Pro Cys Pro
 1 5 10 15

Thr Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Asp Met Asp
 20 25 30

Ile Asp Pro Tyr Lys Glu Phe Gly Ser Ser Tyr Gln Leu Leu Asn Phe
 35 40 45

Leu Pro Leu Asp Phe Phe Pro Asp Leu Asn Ala Leu Val Asp Thr Ala
 50 55 60

Ala Ala Leu Tyr Glu Glu Glu Leu Thr Gly Arg Glu His Cys Ser Pro
 65 70 75 80

His His Thr Ala Ile Arg Gln Ala Leu Val Cys Trp Glu Glu Leu Thr
 85 90 95

Arg Leu Ile Thr Trp Met Ser Glu Asn Thr Thr Glu Glu Val Arg Arg
 100 105 110

Ile Ile Val Asp His Val Asn Asn Thr Trp Gly Leu Lys Val Arg Gln
 115 120 125

Thr Leu Trp Phe His Leu Ser Cys Leu Thr Phe Gly Gln His Thr Val
 130 135 140

Gln Glu Phe Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Ala Pro
 145 150 155 160

Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu His Thr
 165 170 175

Val Ile Arg Arg Gly Gly Ser Arg Ala Ala Arg Ser Pro Arg Arg
 180 185 190

Arg Thr Pro Ser Pro Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg
 195 200 205

Arg Ser Gln Ser Pro Ala Ser Asn Cys
 210 215

<210> 247
 <211> 183
 <212> PRT
 <213> Hepatitis B virus

<400> 247
 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
 1 5 10 15

Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
 20 25 30

Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
 35 40 45

 Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
 50 55 60

 Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala
 65 70 75 80

 Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys
 85 90 95

 Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
 100 105 110

 Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
 115 120 125

 Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
 130 135 140

 Glu Thr Thr Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr
 145 150 155 160

 Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser
 165 170 175

 Gln Ser Arg Glu Ser Gln Cys
 180

 <210> 248
 <211> 185
 <212> PRT
 <213> Hepatitis B virus

 <400> 248
 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
 1 5 10 15

 Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
 20 25 30

 Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
 35 40 45

 Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
 50 55 60

 Leu Met Thr Leu Ala Thr Trp Val Gly Asn Asn Leu Gln Asp Pro Ala
 65 70 75 80

 Ser Arg Asp Leu Val Val Asn Tyr Val Asn Thr Asn Met Gly Leu Lys
 85 90 95

 Ile Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
 100 105 110

 Glu Thr Val Leu Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
 115 120 125

Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
130 135 140

Glu Thr Thr Val Val Arg Arg Arg Asp Arg Gly Arg Ser Pro Arg Arg
145 150 155 160

Arg Thr Pro Ser Pro Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg
165 170 175

Arg Ser Gln Ser Arg Glu Ser Gln Cys
180 185

<210> 249

<211> 185

<212> PRT

<213> Hepatitis B virus

<400> 249

Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
1 5 10 15

Ser Phe Leu Pro Ser Asp Phe Pro Ser Val Arg Asp Leu Leu Asp
20 25 30

Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
35 40 45

Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
50 55 60

Leu Met Thr Leu Ala Thr Trp Val Gly Asn Asn Leu Glu Asp Pro Ala
65 70 75 80

Ser Arg Asp Leu Val Val Asn Tyr Val Asn Thr Asn Val Gly Leu Lys
85 90 95

Ile Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
100 105 110

Glu Thr Val Leu Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
115 120 125

Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
130 135 140

Glu Thr Thr Val Val Arg Arg Arg Asp Arg Gly Arg Ser Pro Arg Arg
145 150 155 160

Arg Thr Pro Ser Pro Arg Arg Arg Pro Ser Gln Ser Pro Arg Arg Arg
165 170 175

Arg Ser Gln Ser Arg Glu Ser Gln Cys
180 185

<210> 250

<211> 183

<212> PRT

<213> Hepatitis B virus

<400> 250
 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
 1 5 10 15
 Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
 20 25 30
 Thr Ala Ala Ala Leu Tyr Arg Asp Ala Leu Glu Ser Pro Glu His Cys
 35 40 45
 Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Asp
 50 55 60
 Leu Met Thr Leu Ala Thr Trp Val Gly Thr Asn Leu Glu Asp Pro Ala
 65 70 75 80
 Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Val Gly Leu Lys
 85 90 95
 Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
 100 105 110
 Glu Thr Val Leu Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
 115 120 125
 Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
 130 135 140
 Glu Thr Thr Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr
 145 150 155 160
 Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Ser
 165 170 175
 Gln Ser Arg Glu Ser Gln Cys
 180

<210> 251
 <211> 183
 <212> PRT
 <213> Marmota monax

<400> .251
 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ser Ser Tyr Gln Leu Leu
 1 5 10 15
 Asn Phe Leu Pro Leu Asp Phe Phe Pro Asp Leu Asn Ala Leu Val Asp
 20 25 30
 Thr Ala Thr Ala Leu Tyr Glu Glu Leu Thr Gly Arg Glu His Cys
 35 40 45
 Ser Pro His His Thr Ala Ile Arg Gln Ala Leu Val Cys Trp Asp Glu
 50 55 60
 Leu Thr Lys Leu Ile Ala Trp Met Ser Ser Asn Ile Thr Ser Glu Gln
 65 70 75 80
 Val Arg Thr Ile Ile Val Asn His Val Asn Asp Thr Trp Gly Leu Lys
 85 90 95

Val Arg Gln Ser Leu Trp Phe His Leu Ser Cys Leu Thr Phe Gly Gln
100 105 110

His Thr Val Gln Glu Phe Leu Val Ser Phe Gly Val Trp Ile Arg Thr
115 120 125

Pro Ala Pro Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
130 135 140

Glu His Thr Val Ile Arg Arg Arg Gly Gly Ala Arg Ala Ser Arg Ser
145 150 155 160

Pro Arg Arg Arg Thr Pro Ser Pro Arg Arg Arg Ser Gln Ser Pro
165 170 175

Arg Arg Arg Arg Ser Gln Cys
180

<210> 252

<211> 26

<212> PRT

<213> Bos taurus

<400> 252

Ser Thr Pro Pro Leu Pro Trp Pro Trp Ser Pro Ala Ala Leu Arg Leu
1 5 10 15

Leu Gln Arg Pro Pro Glu Glu Pro Ala Ala'
20 25

<210> 253

<211> 17

<212> PRT

<213> Ebola virus

<400> 253

Ala Thr Gln Val Glu Gln His His Arg Arg Thr Asp Asn Asp Ser Thr
1 5 10 15

Ala

<210> 254

<211> 17

<212> PRT

<213> Ebola virus

<400> 254

His Asn Thr Pro Val Tyr Lys Leu Asp Ile Ser Glu Ala Thr Gln Val
1 5 10 15

Glu

<210> 255
<211> 17
<212> PRT
<213> Ebola virus

<400> 255
Gly Lys Leu Gly Leu Ile Thr Asn Thr Ile Ala Gly Val Ala Val Leu
1 5 10 15

Ile

<210> 256
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:flexible linker arm

<400> 256
Gly Gly Gly Gly Ser Gly Gly Gly Gly Thr
1 5 10

<210> 257
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: flexible linker arm

<400> 257
Gly Gly Gly Gly Ser Gly Gly Gly Gly
1 5

<210> 258
<211> 513
<212> DNA
<213> Plasmodium falciparum

<220>
<221> CDS
<222> (1)..(513)

<400> 258
atg gac atc gac cct tat aaa gaa ttt gga gct act gtg gag tta ctc 48
Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
1 5 10 15

tcg ttt ttg cct tct gac ttc ttt cct tca gta cga gat ctt cta gat 96
Ser Phe Leu Pro Ser Asp Phe Pro Ser Val Arg Asp Leu Leu Asp
20 25 30

acc gcc tca gct ctg tat cgg gaa gcc tta gag tct cct gag cat tgt	144
Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys	
35	40
	45
 tca cct cac cat act gca ctc agg caa gca att ctt tgc tgg ggg gaa	192
Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu	
50	55
	60
 cta atg act cta gct acc tgg gtg ggt aat ttg gaa gat gga att	240
Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Gly Ile	
65	70
	75
	80
 aac gct aat ccg aac gct aat ccg aac gct aat ccg aac gct aat ccg	288
Asn Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn Pro	
85	90
	95
 gag ctc cca gcg tct aga gac cta gta gtc agt tat gtc aac act aat	336
Glu Leu Pro Ala Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn	
100	105
	110
 atg ggc cta aag ttc agg caa ctc ttg tgg ttt cac att tct tgt ctc	384
Met Gly Leu Lys Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu	
115	120
	125
 act ttt gga aga gaa aca gtt ata gag tat ttg gtg tct ttc gga gtg	432
Thr Phe Gly Arg Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val	
130	135
	140
 tgg att cgc act cct cca gct tat aga cca cca aat gcc cct atc cta	480
Trp Ile Arg Thr Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu	
145	150
	155
	160
 tca aca ctt ccg gag act act gtt gtt tag taa	513
Ser Thr Leu Pro Glu Thr Thr Val Val	
165	170
 <210> 259	
<211> 169	
<212> PRT	
<213> Plasmodium falciparum	
 <400> 259	
Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu	
1	5
	10
	15
Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp	
20	25
	30
Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys	
35	40
	45
Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu	
50	55
	60
Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Gly Ile	
65	70
	75
	80
Asn Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn Pro	
85	90
	95
Glu Leu Pro Ala Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn	
100	105
	110
Met Gly Leu Lys Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu	
115	120
	125
Thr Phe Gly Arg Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val	
130	135
	140

Trp Ile Arg Thr Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu
 145 150 155 160
 Ser Thr Leu Pro Glu Thr Thr Val Val
 165

<210> 260
 <211> 513
 <212> DNA
 <213> Plasmodium falciparum

<220>
 <221> CDS
 <222> (1)..(513)

<400> 260

atg gac atc gac cct tat aaa gaa ttt gga gct act gtg gag tta ctc	48
Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu	
1 5 10 15	

tcg ttt ttg cct tct gac ttc ttt cct tca gta cga gat ctt cta gat	96
Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp	
20 25 30	

acc gcc tca gct ctg tat cgg gaa gcc tta gag tct cct gag cat tgt	144
Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys	
35 40 45	

tca cct cac cat act gca ctc agg caa gca att ctt tgc tgg ggg gaa	192
Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu	
50 55 60	

cta atg act cta gct acc tgg gtg ggt gtt aat ttg gaa gga att aac	240
Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Gly Ile Asn	
65 70 75 80	

gct aat ccg aac gct aat ccg aac gct aat ccg aac gct aat ccg gag	288
Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn Pro Glu	
85 90 95	

ctc gat cca gcg tct aga gac cta gta gtc agt tat gtc aac act aat	336
Leu Asp Pro Ala Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn	
100 105 110	

atg ggc cta aag ttc agg caa ctc ttg tgg ttt cac att tct tgt ctc	384
Met Gly Leu Lys Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu	
115 120 125	

act ttt gga aga gaa aca gtt ata gag tat ttg gtg tct ttc gga gtg	432
Thr Phe Gly Arg Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val	
130 135 140	

tgg att cgc act cct cca gct tat aga cca cca aat gcc cct atc cta	480
Trp Ile Arg Thr Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu	
145 150 155 160	

tca aca ctt ccg gag act act gtt gtt tag taa	513
Ser Thr Leu Pro Glu Thr Thr Val Val	
165 170	

<210> 261
 <211> 169
 <212> PRT
 <213> Plasmodium falciparum

<400> 261

Met	Asp	Ile	Asp	Pro	Tyr	Lys	Glu	Phe	Gly	Ala	Thr	Val	Glu	Leu	Leu
1															15
Ser	Phe	Leu	Pro	Ser	Asp	Phe	Phe	Pro	Ser	Val	Arg	Asp	Leu	Leu	Asp
															30
Thr	Ala	Ser	Ala	Leu	Tyr	Arg	Glu	Ala	Leu	Glu	Ser	Pro	Glu	His	Cys
															45
Ser	Pro	His	His	Thr	Ala	Leu	Arg	Gln	Ala	Ile	Leu	Cys	Trp	Gly	Glu
															60
Leu	Met	Thr	Leu	Ala	Thr	Trp	Val	Gly	Val	Asn	Leu	Glu	Gly	Ile	Asn
															80
Ala	Asn	Pro	Asn	Ala	Asn	Pro	Asn	Ala	Asn	Pro	Asn	Ala	Asn	Pro	Glu
															95
Leu	Asp	Pro	Ala	Ser	Arg	Asp	Leu	Val	Val	Ser	Tyr	Val	Asn	Thr	Asn
															110
Met	Gly	Leu	Lys	Phe	Arg	Gln	Leu	Leu	Trp	Phe	His	Ile	Ser	Cys	Leu
															125
Thr	Phe	Gly	Arg	Glu	Thr	Val	Ile	Glu	Tyr	Leu	Val	Ser	Phe	Gly	Val
															140
Trp	Ile	Arg	Thr	Pro	Pro	Ala	Tyr	Arg	Pro	Pro	Asn	Ala	Pro	Ile	Leu
															160
Ser	Thr	Leu	Pro	Glu	Thr	Thr	Val	Val							
															165

<210> 262
 <211> 519
 <212> DNA
 <213> Plasmodium falciparum

<220>
 <221> CDS
 <222> (1)...(519)

<400> 262

atg	gac	atc	gac	cct	tat	aaa	gaa	ttt	gga	gct	act	gtg	gag	tta	ctc
Met	Asp	Ile	Asp	Pro	Tyr	Lys	Glu	Phe	Gly	Ala	Thr	Val	Glu	Leu	Leu
1															48
tcg	ttt	ttg	cct	tct	gac	ttc	ttt	cct	tca	gta	cga	gat	ctt	cta	gat
Ser	Phe	Leu	Pro	Ser	Asp	Phe	Phe	Pro	Ser	Val	Arg	Asp	Leu	Leu	Asp
															96
acc	gcc	tca	gct	ctg	tat	cgg	gaa	gcc	tta	gag	tct	cct	gag	cat	tgt
Thr	Ala	Ser	Ala	Leu	Tyr	Arg	Glu	Ala	Leu	Glu	Ser	Pro	Glu	His	Cys
															144
tca	cct	cac	cat	act	gca	ctc	agg	caa	gca	att	ctt	tgc	tgg	ggg	gaa
Ser	Pro	His	His	Thr	Ala	Leu	Arg	Gln	Ala	Ile	Leu	Cys	Trp	Gly	Glu
															192
cta	atg	act	cta	gct	acc	tgg	gtg	ggt	gtt	aat	ttg	gaa	gat	cca	gcg
Leu	Met	Thr	Leu	Ala	Thr	Trp	Val	Gly	Val	Asn	Leu	Glu	Asp	Pro	Ala
															240
65															80

tct aga gac cta gta gtc agt tat gtc aac act aat atg ggc cta aag	288		
Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys			
85	90	95	
ttc agg caa ctc ttg tgg ttt cac att tct tgt ctc act ttt gga aga	336		
Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg			
100	105	110	
gaa aca gtt ata gag tat ttg gtg tct ttc gga gtg tgg att cgc act	384		
Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr			
115	120	125	
cct cca gct tat aga cca cca aat gcc cct atc cta tca aca ctt ccg	432		
Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro			
130	135	140	
gag act act gtt gtt gga att gaa tat ctg aac aaa atc cag aac tct	480		
Glu Thr Thr Val Val Gly Ile Glu Tyr Leu Asn Lys Ile Gln Asn Ser			
145	150	155	160
ctg tcc acc gaa tgg tct ccg tgc tcc gtt acc tag taa	519		
Leu Ser Thr Glu Trp Ser Pro Cys Ser Val Thr			
165	170		
<210> 263			
<211> 171			
<212> PRT			
<213> Plasmodium falciparum			
<400> 263			
Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu			
1	5	10	15
Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp			
20	25	30	
Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys			
35	40	45	
Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu			
50	55	60	
Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala			
65	70	75	80
Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys			
85	90	95	
Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg			
100	105	110	
Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr			
115	120	125	
Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro			
130	135	140	
Glu Thr Thr Val Val Gly Ile Glu Tyr Leu Asn Lys Ile Gln Asn Ser			
145	150	155	160
Leu Ser Thr Glu Trp Ser Pro Cys Ser Val Thr			
165	170		

<210> 264
<211> 516
<212> DNA
<213> Plasmodium falciparum

<220>
 <221> CDS
 <222> (1)..(516)

<400> 264 atg gac atc gac cct tat aaa gaa ttt gga gct act gtg gag tta ctc Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu 1 5 10 15	48
tcg ttt ttg cct tct gac ttc ttt cct tca gta cga gat ctt cta gat Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp 20 25 30	96
acc gcc tca gct ctg tat cgg gaa gcc tta gag tct cct gag cat tgt Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys 35 40 45	144
tca cct cac cat act gca ctc agg caa gca att ctt tgc tgg ggg gaa Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu 50 55 60	192
cta atg act cta gct acc tgg gtg ggt gtt aat ttg gaa gat gga att Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Gly Ile 65 70 75 80	240
aac gct aat ccg aac gct aat ccg aac gct aat ccg aac gct aat ccg Asn Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn Pro 85 90 95	288
gag ctc cca gcg tct aga gac cta gta gtc agt tat gtc aac act aat Glu Leu Pro Ala Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn 100 105 110	336
atg ggc cta aag ttc agg caa ctc ttg tgg ttt cac att tct tgt ctc Met Gly Leu Lys Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu 115 120 125	384
act ttt gga aga gaa aca gtt ata gag tat ttg gtg tct ttc gga gtg Thr Phe Gly Arg Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val 130 135 140	432
tgg att cgc act cct cca gct tat aga cca cca aat gcc cct atc cta Trp Ile Arg Thr Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu 145 150 155 160	480
tca aca ctt ccg gag act act gtt gtt tgc tag taa Ser Thr Leu Pro Glu Thr Thr Val Val Cys 165 170	516

<210> 265
 <211> 170
 <212> PRT
 <213> Plasmodium falciparum

<400> 265
 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
 1 5 10 15

Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp 20 25 30

Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
 35 40 45
 Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
 50 55 60
 Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Gly Ile
 65 70 75 80
 Asn Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn Pro
 85 90 95
 Glu Leu Pro Ala Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn
 100 105 110
 Met Gly Leu Lys Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu
 115 120 125
 Thr Phe Gly Arg Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val
 130 135 140
 Trp Ile Arg Thr Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu
 145 150 155 160
 Ser Thr Leu Pro Glu Thr Thr Val Val Cys
 165 170

<210> 266
 <211> 579
 <212> DNA
 <213> Plasmodium falciparum

<220>
 <221> CDS
 <222> (1)...(579)

<400> 266
 atg gac atc gac cct tat aaa gaa ttt gga gct act gtg gag tta ctc 48
 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
 1 5 10 15

 tcg ttt ttg cct tct gac ttc ttt cct tca gta cga gat ctt cta gat 96
 Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
 20 25 30

 acc gcc tca gct ctg tat cgg gaa gcc tta gag tct cct gag cat tgt 144
 Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
 35 40 45

 tca cct cac cat act gca ctc agg caa gca att ctt tgc tgg ggg gaa 192
 Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
 50 55 60

 cta atg act cta gct acc tgg gtg ggt aat ttg gaa gat gga att 240
 Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Gly Ile
 65 70 75 80

 aac gct aat ccg aac gct aat ccg aac gct aat ccg aac gct aat ccg 288
 Asn Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn Pro
 85 90 95

 gag ctc cca gcg tct aga gac cta gta gtc agt tat gtc aac act aat 336
 Glu Leu Pro Ala Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn
 100 105 110

atg ggc cta aag ttc agg caa ctc ttg tgg ttt cac att tct tgt ctc	384																																						
Met Gly Leu Lys Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu																																							
115	120		125	act ttt gga aga gaa aca gtt ata gag tat ttg gtg tct ttc gga gtg	432	Thr Phe Gly Arg Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val		130	135		140	tgg att cgc act cct cca gct tat aga cca cca aat gcc cct atc cta	480	Trp Ile Arg Thr Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu		145	150		155		160	tca aca ctt ccg gag act act gtt gtt gga att gaa tat ctg aac aaa	528	Ser Thr Leu Pro Glu Thr Thr Val Val Gly Ile Glu Tyr Leu Asn Lys		165	170		175	atc cag aac tct ctg tcc acc gaa tgg tct ccg tgc tcc gtt acc tag	576	Ile Gln Asn Ser Leu Ser Thr Glu Trp Ser Pro Cys Ser Val Thr		180	185		190	taa	579
	125																																						
act ttt gga aga gaa aca gtt ata gag tat ttg gtg tct ttc gga gtg	432																																						
Thr Phe Gly Arg Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val																																							
130	135		140	tgg att cgc act cct cca gct tat aga cca cca aat gcc cct atc cta	480	Trp Ile Arg Thr Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu		145	150		155		160	tca aca ctt ccg gag act act gtt gtt gga att gaa tat ctg aac aaa	528	Ser Thr Leu Pro Glu Thr Thr Val Val Gly Ile Glu Tyr Leu Asn Lys		165	170		175	atc cag aac tct ctg tcc acc gaa tgg tct ccg tgc tcc gtt acc tag	576	Ile Gln Asn Ser Leu Ser Thr Glu Trp Ser Pro Cys Ser Val Thr		180	185		190	taa	579								
	140																																						
tgg att cgc act cct cca gct tat aga cca cca aat gcc cct atc cta	480																																						
Trp Ile Arg Thr Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu																																							
145	150		155		160	tca aca ctt ccg gag act act gtt gtt gga att gaa tat ctg aac aaa	528	Ser Thr Leu Pro Glu Thr Thr Val Val Gly Ile Glu Tyr Leu Asn Lys		165	170		175	atc cag aac tct ctg tcc acc gaa tgg tct ccg tgc tcc gtt acc tag	576	Ile Gln Asn Ser Leu Ser Thr Glu Trp Ser Pro Cys Ser Val Thr		180	185		190	taa	579																
	155		160	tca aca ctt ccg gag act act gtt gtt gga att gaa tat ctg aac aaa	528	Ser Thr Leu Pro Glu Thr Thr Val Val Gly Ile Glu Tyr Leu Asn Lys		165	170		175	atc cag aac tct ctg tcc acc gaa tgg tct ccg tgc tcc gtt acc tag	576	Ile Gln Asn Ser Leu Ser Thr Glu Trp Ser Pro Cys Ser Val Thr		180	185		190	taa	579																		
	160																																						
tca aca ctt ccg gag act act gtt gtt gga att gaa tat ctg aac aaa	528																																						
Ser Thr Leu Pro Glu Thr Thr Val Val Gly Ile Glu Tyr Leu Asn Lys																																							
165	170		175	atc cag aac tct ctg tcc acc gaa tgg tct ccg tgc tcc gtt acc tag	576	Ile Gln Asn Ser Leu Ser Thr Glu Trp Ser Pro Cys Ser Val Thr		180	185		190	taa	579																										
	175																																						
atc cag aac tct ctg tcc acc gaa tgg tct ccg tgc tcc gtt acc tag	576																																						
Ile Gln Asn Ser Leu Ser Thr Glu Trp Ser Pro Cys Ser Val Thr																																							
180	185		190	taa	579																																		
	190																																						
taa	579																																						

<210> 267
<211> 191
<212> PRT
<213> Plasmodium falciparum

<400> 267
Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
1 5 10 15
Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
20 25 30
Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
35 40 45
Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
50 55 60
Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Gly Ile
65 70 75 80
Asn Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn Pro
85 90 95
Glu Leu Pro Ala Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn
100 105 110
Met Gly Leu Lys Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu
115 120 125
Thr Phe Gly Arg Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val
130 135 140
Trp Ile Arg Thr Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu
145 150 155 160
Ser Thr Leu Pro Glu Thr Thr Val Val Gly Ile Glu Tyr Leu Asn Lys
165 170 175
Ile Gln Asn Ser Leu Ser Thr Glu Trp Ser Pro Cys Ser Val Thr
180 185 190

<210> 268
<211> 591
<212> DNA
<213> Plasmodium falciparum

<220>

<221> CDS

<222> (1) .. (591)

<400> 268

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atg gac atc gac cct tat aaa gaa ttt gga gct act gtg gag tta ctc 48
Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
   1           5           10          15

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tcg ttt ttg cct tct gac ttc ttt cct tca gta cga gat ctt cta gat 96
Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
          20           25           30

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acc gcc tca gct ctg tat cg^g gaa gcc tta gag tct cct gag cat tgt 144
Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
35 40 45

tca cct cac cat act gca ctc agg caa gca att ctt tgc tgg ggg gaa 192
Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
50 55 60

cta atg act cta gct acc tgg gtg ggt gtt aat ttg gaa gat gga att 240
Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Gly Ile
65 70 75 80

```

aac gcg aat ccg aac gtg gat ccg aat gcc aac cct aac gcc aac cca  288
Asn Ala Asn Pro Asn Val Asp Pro Asn Ala Asn Pro Asn Ala Asn Pro
                    85           90           95

```

aat gcg aac cca gag ctc cca gcg tct aga gac cta gta gtc agt tat 336
Asn Ala Asn Pro Glu Leu Pro Ala Ser Arg Asp Leu Val Val Ser Tyr
100 105 110

gtc aac act aat atg ggc cta aag ttc agg caa ctc ttg tgg ttt cac 384
 Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln Leu Leu Trp Phe His
 115 120 125

```

att tct tgt ctc act ttt gga aga gaa aca gtt ata gag tat ttg gtg      432
Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val Ile Glu Tyr Leu Val
          130           135           140

```

tct ttc gga gtg tgg att cgc act cct cca gct tat aga cca cca aat 480
 Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala Tyr Arg Pro Pro Asn
 145 150 155 160

```

gcc cct atc cta tca aca ctt ccg gag act act gtt gtt gga att gaa      528
Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr Val Val Gly Ile Glu
165          170          175

```

tat ctg aac aaa atc cag aac tct ctg tcc acc gaa tgg tct ccg tgc 576
 Tyr Leu Asn Lys Ile Gln Asn Ser Leu Ser Thr Glu Trp Ser Pro Cys
 180 185 190

tcc gtt acc tag taa 591
Ser Val Thr
195

<210> 269
<211> 195
<212> PRT
<213> Plasmodium falciparum

<400> 269
Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
1 5 10 15
Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
20 25 30
Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
35 40 45
Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
50 55 60
Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Gly Ile
65 70 75 80
Asn Ala Asn Pro Asn Val Asp Pro Asn Ala Asn Pro Asn Ala Asn Pro
85 90 95
Asn Ala Asn Pro Glu Leu Pro Ala Ser Arg Asp Leu Val Val Ser Tyr
100 105 110
Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln Leu Leu Trp Phe His
115 120 125
Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val Ile Glu Tyr Leu Val
130 135 140
Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala Tyr Arg Pro Pro Asn
145 150 155 160
Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr Val Val Gly Ile Glu
165 170 175
Tyr Leu Asn Lys Ile Gln Asn Ser Leu Ser Thr Glu Trp Ser Pro Cys
180 185 190
Ser Val Thr
195

<210> 270
<211> 561
<212> DNA
<213> Human immunodeficiency virus type 1

<220>
<221> CDS
<222> (1)...(561)

<400> 270
atg gac atc gac cct tat aaa gaa ttt gga gct act gtg gag tta ctc 48
Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
1 5 10 15

tcg ttt ttg cct tct gac ttc ttt cct tca gta cga gat ctt cta gat 96
Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
20 25 30

acc gcc tca gct ctg tat cgg gaa gcc tta gag tct cct gag cat tgt 144
Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
35 40 45

tca cct cac cat act gca ctc agg caa gca att ctt tgc tgg ggg gaa 192
Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
50 55 60

cta atg act cta gct acc tgg gtg ggt gtt aat ttg gaa gat gga att 240
 Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Gly Ile
 65 70 75 80

 caa tgg atg gaa tgg gat cgt gag atc aac aat tat acc agc ctg ata 288
 Gln Trp Met Glu Trp Asp Arg Glu Ile Asn Asn Tyr Thr Ser Leu Ile
 85 90 95

 cat tct tta att gaa gag tcc cag aac caa cag gag aaa aat gaa caa 336
 His Ser Leu Ile Glu Glu Ser Gln Asn Gln Glu Lys Asn Glu Gln
 100 105 110

 gag ctc cca gcg tct aga gac cta gta gtc agt tat gtc aac act aat 384
 Glu Leu Pro Ala Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn
 115 120 125

 atg ggc cta aag ttc agg caa ctc ttg tgg ttt cac att tct tgt ctc 432
 Met Gly Leu Lys Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu
 130 135 140

 act ttt gga aga gaa aca gtt ata gag tat ttg gtg tct ttc gga gtg 480
 Thr Phe Gly Arg Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val
 145 150 155 160

 tgg att cgc act cct cca gct tat aga cca cca aat gcc cct atc cta 528
 Trp Ile Arg Thr Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu
 165 170 175

 tca aca ctt ccg gag act act gtt gtt tag taa 561
 Ser Thr Leu Pro Glu Thr Thr Val Val
 180 185

 <210> 271
 <211> 185
 <212> PRT
 <213> Human immunodeficiency virus type 1

 <400> 271
 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
 1 5 10 15
 Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
 20 25 30
 Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
 35 40 45
 Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
 50 55 60
 Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Gly Ile
 65 70 75 80
 Gln Trp Met Glu Trp Asp Arg Glu Ile Asn Asn Tyr Thr Ser Leu Ile
 85 90 95
 His Ser Leu Ile Glu Glu Ser Gln Asn Gln Glu Lys Asn Glu Gln
 100 105 110
 Glu Leu Pro Ala Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn
 115 120 125
 Met Gly Leu Lys Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu
 130 135 140
 Thr Phe Gly Arg Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val
 145 150 155 160
 Trp Ile Arg Thr Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu
 165 170 175

Ser Thr Leu Pro Glu Thr Thr Val Val
180 185

<210> 272
<211> 564
<212> DNA
<213> Human immunodeficiency virus type 1

<220>
<221> CDS
<222> (1)...(564)

<400> 272
atg gac atc gac cct tat aaa gaa ttt gga gct act gtg gag tta ctc 48
Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
1 5 10 15

tcg ttt ttg cct tct gac ttc ttt cct tca gta cga gat ctt cta gat 96
Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
20 25 30

acc gcc tca gct ctg tat cgg gaa gcc tta gag tct cct gag cat tgt 144
Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
35 40 45

tca cct cac cat act gca ctc agg caa gca att ctt tgc tgg ggg gaa 192
Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
50 55 60

cta atg act cta gct acc tgg gtg ggt gtt aat ttg gaa gat gga att 240
Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Gly Ile
65 70 75 80

caa tgg atg gaa tgg gat cgt gag atc aac aat tat acc agc ctg ata 288
Gln Trp Met Glu Trp Asp Arg Glu Ile Asn Asn Tyr Thr Ser Leu Ile
85 90 95

cat tct tta att gaa gag tcc cag aac caa cag gag aaa aat gaa caa 336
His Ser Leu Ile Glu Glu Ser Gln Asn Gln Glu Lys Asn Glu Gln
100 105 110

gag ctc cca gcg tct aga gac cta gta gtc agt tat gtc aac act aat 384
Glu Leu Pro Ala Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn
115 120 125

atg ggc cta aag ttc agg caa ctc ttg tgg ttt cac att tct tgt ctc 432
Met Gly Leu Lys Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu
130 135 140

act ttt gga aga gaa aca gtt ata gag tat ttg gtg tct ttc gga gtg 480
Thr Phe Gly Arg Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val
145 150 155 160

tgg att cgc act cct cca gct tat aga cca cca aat gcc cct atc cta 528
Trp Ile Arg Thr Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu
165 170 175

tca aca ctt ccg gag act act gtt gtt tgc tag taa
Ser Thr Leu Pro Glu Thr Thr Val Val Cys
180 185

564

<210> 273
<211> 186
<212> PRT
<213> Human immunodeficiency virus type 1

<400> 273
Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
1 5 10 15
Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
20 25 30
Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
35 40 45
Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
50 55 60
Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Gly Ile
65 70 75 80
Gln Trp Met Glu Trp Asp Arg Glu Ile Asn Asn Tyr Thr Ser Leu Ile
85 90 95
His Ser Leu Ile Glu Glu Ser Gln Asn Gln Glu Lys Asn Glu Gln
100 105 110
Glu Leu Pro Ala Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn
115 120 125
Met Gly Leu Lys Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu
130 135 140
Thr Phe Gly Arg Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val
145 150 155 160
Trp Ile Arg Thr Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu
165 170 175
Ser Thr Leu Pro Glu Thr Thr Val Val Cys
180 185

<210> 274
<211> 651
<212> DNA
<213> Spermophilus variegatus

<400> 274
atgtatctt ttcacctgtc ccttggttt gcctgtgtt catgtcctac tggtcaagcc 60
tccaagctgt gccttggatg gcttgggac atggacatacg atccctataaa agaatttggt 120
tcttcttatac agttgttcaa tttttttctt ttggactttt ttccctgatct caatgcattg 180
gtggacactg ctgctgctt ttatgaagaa gaatttaacag gttagggagca ttgttctcct 240
catcatactg ctattagaca ggccttagtg tggtggaaag aattaacttag attaattaca 300
tggatgatgtg aaaataacaac agaagaagtt agaagaatta ttgttgcata tgtcaataat 360
acttggggac ttaaaagtaag acagacttta tggtttcatc tatcatgtct tacttttgg 420
caacacacag ttcaagaatt tttgggttagt tttggagtat ggattagaac tccagctcct 480
tatagaccac ctaatgcacc cattttatca actcttcgg aacatacagt cattaggaga 540
agaggaggtt caagagctgc taggtcccc cgaagacgca ctcccctctcc tcgcaggaga 600
aggtctcaat caccgcgtcg cagacgctct caatctccag ctcccaactg c 651

<210> 275
<211> 549
<212> DNA
<213> Hepatitis B virus

<400> 275
atggacatcg acccttataa agaatttgg a gctactgtgg agttactctc gttttgcct 60
tctgacttct ttccttcagt acgagatctt ctagataccg cctcagctct gtatcggaa 120
gccttagagt ctccctgagca ttgtcacct caccatactg cactcaggca agcaattctt 180
tgctgggggg aactaatgac tctagctacc tgggtgggtg ttaatttgg a agatccagcg 240
tctagagacc tagtagtca gttatgtcaac actaatatgg gcctaaagtt caggcaactc 300
ttgtggttc acatttctt g tctca cttttt ggaagagaaa cagttataga gtatttgg 360
tcttcggag tgtggattcg cactcctcca gcttata gac caccataatgc ccctatccta 420
tcaacacttc cggagactac tg tttttaga cgacgaggca ggtcccctag aagaagaact 480
ccctcgcc tc gcagacgaag gtctcaatcg ccgcgtcgca gaagatctca atctcggaa 540
tctcaatgt 549

<210> 276
<211> 554
<212> DNA
<213> Hepatitis B virus

<400> 276
atggacattg acccttataa agaatttgg a gctactgtgg agttactctc gttttgcct 60
tctgacttct ttccttcgt acgagatctc ctagacacccg cctcagctct gtatcgagaa 120
gccttagagt ctccctgagca ttgtcacct caccatactg cactcaggca agccattctc 180
tgctgggggg aattgatgac tctagctacc tgggtggta ataatttgc a agatccagca 240
tccagagatc tagtagtcaa ttatgttaat actaacaatgg gttt aaagat caggcaacta 300
ttgtggttc atatatctt cttactttt ggaagagaga ctgtacttga atatttgg 360
tcttcggag tgtggattcg cactcctcca gcttata gac caccataatgc ccctatccta 420
tcaacacttc cggaaactac tg tttttaga cgacgggacc gaggcaggc ccctagaaga 480
agaactccct cgcctcgca acgcagatct caatcgccgc gtcgcagaag atctcaatct 540
cggaaatctc aatgt 555

<210> 277
<211> 555
<212> DNA
<213> Hepatitis B virus

<400> 277
atggacattg acccttataa agaatttgg a gctactgtgg agttactctc gttttgcct 60
tctgacttct ttccttcgt cagagatctc ctagacacccg cctcagctct gtatcgagaa 120
gccttagagt ctccctgagca ttgtcacct caccatactg cactcaggca agccattctc 180
tgctgggggg aattgatgac tctagctacc tgggtggta ataatttgg a agatccagca 240
tctaggatc ttgttagtaaa ttatgttaat actaacgtgg gttt aaagat caggcaacta 300
ttgtggttc atatatctt cttactttt ggaagagaga ctgtacttga atatttgg 360
tcttcggag tgtggattcg cactcctcca gcttata gac caccataatgc ccctatccta 420
tcaacacttc cggaaactac tg tttttaga cgacgggacc gaggcaggc ccctagaaga 480
agaactccct cgcctcgca acgcagatct ccatcgccgc gtcgcagaag atctcaatct 540
cggaaatctc aatgt 555

<210> 278
<211> 549
<212> DNA
<213> Hepatitis B virus

<400> 278
atggacattg acccttataa agaatttgg a gctactgtgg agttactctc gttttgcct 60
tctgacttct ttccttcgt acgagatctt ctagataccg ccgcagctct gtatcggat 120
gccttagagt ctccctgagca ttgtcacct caccatactg cactcaggca agcaattctt 180
tgctggggag acttaatgac tctagctacc tgggtggta ctaattttaga agatccagca 240
tctaggatc tagtagtca gactaatgtgg gcctaaagtt cagacaatta 300

ttgtggtttc acatttcttg tctcaactttt ggaagagaaaa cggttctaga gtatttggtg 360
tcttttggag tgtggattcg cactcctcca gcttataagac caccaaatgc ccctatcccta 420
tcaacgcttc cggagactac tggtttaga cgacgaggca ggtcccctag aagaagaact 480
ccctcgccctc gcagacgaag atctcaatcg ccgcgtcgca gaagatctca atctcggaa 540
tctcaatgt 549

<210> 279
<211> 549
<212> DNA
<213> Marmota monax

<400> 279
atggcttgg ggcatggaca tagatcctta taaaagaattt gggtcatctt atcagttgtt 60
gaattttctt cctttggact tcttcctga tcataatgct ttgggtggaca ctgctactgc 120
cttgtatgaa gaagaactaa caggtaggaa acattgctct ccgcaccata cagctattag 180
acaagctta gtatgctggg atgaattaac taaaattgata gcttggatga gctctaaccat 240
aacttctgaa caagtaagaa caatcattgt aaatcatgtc aatgataacct ggggacttaa 300
ggtgagacaa agtttatgtt ttcatggc atgtctact ttcggacaac atacagttca 360
agaattttta gtaagtttg gagtatggat caggactcca gctccatata gacccctaa 420
tgcaccatt ctctcgactc ttccggaaaca tacagtctt aggagaagag gaggtgcaag 480
agtttctagg tcccccagaa gacgcactcc ctctcctcgc aggagaagat ctcaatcacc 540
gcgtcgag 549

<210> 280
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: human
cytochrome P450

<400> 280
Gln Glu Lys Gln Leu Asp Glu Asn Ala Asn Val Gln Leu
1 5 10

<210> 281
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: modified
portion of Hepatitis B core

<400> 281
Cys Val Val Thr Thr Glu Pro
1 5

<210> 282
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:modified
portion of Hepatitis B core

<400> 282
gcaagcttac tattgaattc cgcaaacaac agtagtctcc gg 42

<210> 283
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: modified portion of Hepatitis B core

<400> 283
Thr Thr Val Val Gly Ile Glu Tyr Leu Asn Lys Ile Gln Asn Ser Leu
1 5 10 15

Ser Thr Glu Trp Ser Pro Cys Ser Val Thr
20 25

<210> 284
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: modified portion of Hepatitis B core

<400> 284
Thr Thr Val Val Cys Gly Ile Glu Tyr Leu Asn Lys Ile Gln Asn Ser
1 5 10 15

Leu Ser Thr Glu Trp Ser Pro Ala Ser Val Thr
20 25

<210> 285
<211> 51
<212> DNA
<213> plasmid pKK223

<400> 285
ttcacacagg aaacagaatt cccggggatc cgtcgacctg cagccaagct t 51

<210> 286
<211> 38
<212> DNA
<213> plasmid pKK223

<400> 286
ttcacataag gagaaaaaaa cattggatc cgaagctt 38

<210> 287
<211> 20
<212> PRT
<213> Plasmodium yoelii

<400> 287
Glu Phe Val Lys Gln Ile Ser Ser Gln Leu Thr Glu Glu Trp Ser Gln
1 5 10 15

Cys Ser Val Thr
20

<210> 288
<211> 14
<212> PRT
<213> Escherichia coli

<400> 288
Cys Cys Glu Leu Cys Cys Tyr Pro Ala Cys Ala Gly Cys Asn
1 5 10

<210> 289
<211> 18
<212> PRT
<213> Escherichia coli

<400> 289
Asn Thr Phe Tyr Cys Cys Glu Leu Cys Cys Tyr Pro Ala Cys Ala Gly
1 5 10 15

Cys Asn

<210> 290
<211> 18
<212> PRT
<213> Escherichia coli

<400> 290
Ser Ser Asn Tyr Cys Cys Glu Leu Cys Cys Tyr Pro Ala Cys Ala Gly
1 5 10 15

Cys Asn

<210> 291
<211> 10
<212> PRT
<213> Influenza virus

<400> 291
Leu Ile Asp Ala Leu Leu Gly Asp Pro Cys
1 5 10

<210> 292
<211> 9
<212> PRT
<213> Influenza virus

<400> 292
Thr Leu Ile Asp Ala Leu Leu Gly Cys
1 5

<210> 293
<211> 42
<212> PRT
<213> Homo sapiens

<400> 293
Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
1 5 10 15
Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile
20 25 30
Gly Leu Met Val Gly Gly Val Val Ile Ala
35 40

<210> 294
<211> 11
<212> PRT
<213> Homo sapiens

<400> 294
Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile
1 5 10

<210> 295
<211> 33
<212> PRT
<213> Homo sapiens

<400> 295
Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
1 5 10 15
Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile
20 25 30
Gly

<210> 296
<211> 60
<212> DNA
<213> Homo sapiens

<400> 296
aattgatgcg gaatttcgtc atgacagcgg ctagatggtg caccatcaga aactggagct 60

<210> 297
<211> 52
<212> DNA
<213> Homo sapiens

<400> 297
ccagttctg atggcacc tcatacgccgc tgtcatgacg aaattccgca tc 52

<210> 298
<211> 42
<212> DNA
<213> Homo sapiens

<400> 298
aattgaagat gtcggttcta acaagggggc aattatcgag ct 42

<210> 299
<211> 34
<212> DNA
<213> Homo sapiens

<400> 299
cgataattgc ccccttgtta gaaccgacat cttc 34

<210> 300
<211> 82
<212> DNA
<213> Homo sapiens

<400> 300
gcgggaattt atgcggatt tcgtcatgac agcggctatg aggtgcacca tcagaaactg 60
gtttttttt ccgaagatgt cg 82

<210> 301
<211> 83
<212> DNA
<213> Homo sapiens

<400> 301
gcggagctcc gctatgacaa ccccacccac cattaagccg ataattgccc cttttaga 60
accgacatct tcggcaaaga aaa 83

<210> 302
<211> 53
<212> DNA
<213> Homo sapiens

<400> 302
gcggagctcg ataattgccc cttttaga accgacatct tcggcaaaga aaa 53

<210> 303
<211> 31
<212> DNA
<213> Homo sapiens

<400> 303
gcgggaattt tggatgcgga atttcgtcat g 31

<210> 304
<211> 17
<212> DNA
<213> Homo sapiens

<400> 304
gcggagctcc gctatga

17

<210> 305
<211> 31
<212> DNA
<213> Homo sapiens

<400> 305
gcgggaattc tggatgcgga atttcgtcat g

31

<210> 306
<211> 18
<212> DNA
<213> Homo sapiens

<400> 306
gcggagctcg ataattgc

18

<210> 307
<211> 24
<212> PRT
<213> Haemophilus influenzae

<400> 307
Met Ser Leu Leu Thr Glu Val Glu Thr Pro Ile Arg Asn Glu Trp Gly
1 5 10 15

Cys Arg Cys Asn Asp Ser Ser Asp
20

<210> 308
<211> 23
<212> PRT
<213> Haemophilus influenzae

<400> 308
Ser Leu Leu Thr Glu Val Glu Thr Pro Ile Arg Asn Glu Trp Gly Cys
1 5 10 15

Arg Cys Asn Asp Ser Ser Asp
20

<210> 309
<211> 23
<212> PRT
<213> Haemophilus influenzae

<400> 309
Ser Leu Leu Thr Glu Val Glu Thr Pro Ile Arg Asn Glu Trp Gly Ala
1 5 10 15

Arg Ala Asn Asp Ser Ser Asp
20

<210> 310
<211> 35
<212> PRT
<213> Haemophilus influenzae

<400> 310
Met Gly Ile Ser Leu Leu Thr Glu Val Glu Thr Pro Ile Arg Asn Glu
1 5 10 15

Trp Gly Cys Arg Cys Asn Asp Ser Ser Asp Glu Leu Leu Gly Trp Leu
20 25 30

Trp Gly Ile
35

<210> 311
<211> 35
<212> PRT
<213> Haemophilus influenzae

<400> 311
Met Gly Ile Ser Leu Leu Thr Glu Val Glu Thr Pro Ile Arg Asn Glu
1 5 10 15

Trp Gly Cys Arg Cys Asn Asp Ser Ser Asp Glu Leu Leu Gly Trp Leu
20 25 30

Trp Gly Ile
35

<210> 312
<211> 23
<212> PRT
<213> Influenza A virus

<400> 312
Ser Leu Leu Thr Glu Val Glu Thr Pro Ile Arg Asn Glu Trp Gly Ala
1 5 10 15

Arg Ala Asn Asp Ser Ser Asp
20

<210> 313
<211> 19
<212> PRT
<213> Influenza A virus

<400> 313
Glu Gln Gln Ser Ala Val Asp Ala Asp Asp Ser His Phe Val Ser Ile
1 5 10 15

Glu Leu Glu